

# case study

TULSA, OKLAHOMA:

## Integrating the 21st century skill of managing and leading projects into the middle and high school curriculum



**F**or years employers have been making the case that they need employees that are workforce ready. **Employers define workforce readiness as the ability to understand core subject matter, plus being able to execute 21st century skills, including project**

**management and leadership.** This case study from Tulsa, Oklahoma demonstrates that youth have the ability to acquire the life, learning and career skills of project management and demonstrate competence in these applied skills that can be used in and out of school throughout their lifetime.

### Background

This case study from Tulsa Oklahoma involved 2 schools (one middle and one high school) and had the support of the Project Management Institute's (PMI) Tulsa chapter.

Kris Reynolds, a certified Project Management Professional (PMP) and now past President of PMI Tulsa Chapter, built a project based learning, project management program targeted to middle school students, ages 10 – 13. His goal



*Kris Reynolds*

was to deliver hands-on training that incorporated not only project management knowledge but also 21st century skills including communication, collaboration, creativity and critical thinking. His curriculum is a variation of the PMI Educational Foundation's educational resources, and contains new and engaging activities designed to be easily implemented and for students to get the most learning value out of the project experiences.

### Introduction

Motivated by a conversation with his daughter, Kris started plans to integrate project management into Tulsa's middle and high school curriculum about four years ago. Kris was very concerned when his nine year old daughter came home from school one day and said she had been learning & memorizing the state capitols. As a parent, Kris worried that rote memorization of such facts did nothing to improve his daughter and her classmates' critical thinking skills. This was the catalyst that drove him to approach his daughter's school and offer to start a project management program for youth.

### Middle School Program

To begin his middle school project management program at Thoreau Demonstration Academy, Kris held introductory project management courses using team and hands-on exercises to

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Leadership and responsibility are core components of project management and 21st century skills

teach the students project management and leadership concepts. He put great emphasis on the practical and applied skills of project management including team building and diversity, time management and scheduling, team member roles and responsibilities, as well as communication management and risk assessment.

**Recognizing collaboration as an essential project management and 21st century workforce readiness skill, Kris focused on incorporating team building and bonding exercises into the program.** To get the students comfortable in the new course and in working in teams, he led an "ice breaker" activity, which was followed by a tower building exercise and an online personality assessment.

To further cement the students' understanding of project management, Kris had them apply their project management knowledge to a real world project that students plan and do. Projects provide an interactive and tangible way for students to demonstrate project management and leadership skills and provide opportunities to practice a variety of 21st Century Skills.

The middle school project highlighted in this case study centers around the school's end-of-year 8th Grade Day, which is a series of

celebrations and activities organized by the 8th grade graduates held immediately after their middle school graduation ceremony. Because of their project management training, the students had the know-how and skills they needed to tackle the project. Every

Friday after school, starting in January 2012, the student team, which was hand-picked by teachers based on their maturity and leadership capabilities, met for 40 minutes with teachers mentoring the students.

The students were extremely excited and eager to conduct the planning and execution of such an important event in their middle-school career. Sheridan, one of the 8th grade students picked to participate said "I thought it'd be great, because...I get to participate in something that everyone's going to have fun with!"

Offering the students a project in which they clearly had strong motivation for a successful outcome was critical to their engagement as team members. In the real world this isn't always the case, but at an 8th grade level it is important for students to complete projects they care about and that can drive their learning.

This connection to outcomes students care about and that affect their personal lives helped students realize that project management and leadership skills are not alien concepts but are applicable to their everyday life.

**Having a real-world project to work on also helped Kris and the teacher mentors underscore key project management skills that are often overlooked in the professional world.** For example, Kris had the students define 'project risk' for their 8th grade celebration. When they considered the risk of vendors not showing up for the event, their t-shirts arriving late, or a miscalculation that causes them to go over-

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The specific schools involved in the case study were:

- **Middle School** - Thoreau Demonstration Academy, which has implemented the MicroSociety program (<http://thoreau.tulsa.schools.org/curriculum/microsociety>)
- **High School** - Tulsa Tech, a multi campus independent school district in Tulsa, which provides career-focused training for high school students (<http://www.tulsatech.com/About/History.aspx>)

budget, the students instantly understood the importance of risk management. Defining and planning for real risks to their event made a lasting impression on the students.

In the early stages of the project, the 8th graders struggled with communication skills, and this offered Kris and the teacher mentors the opportunity to pass along techniques for speaking to one another clearly and consistently. As a result, the students gained confidence in communicating important messages for the project to stay on track, making it much easier for them to share their thoughts and opinions without feeling awkward or uncomfortable.

*“The kids love the program, they’re learning a lot and going home and telling their parents stories, and the parents are telling me how much their kids enjoy it. That’s telling me a lot!”*

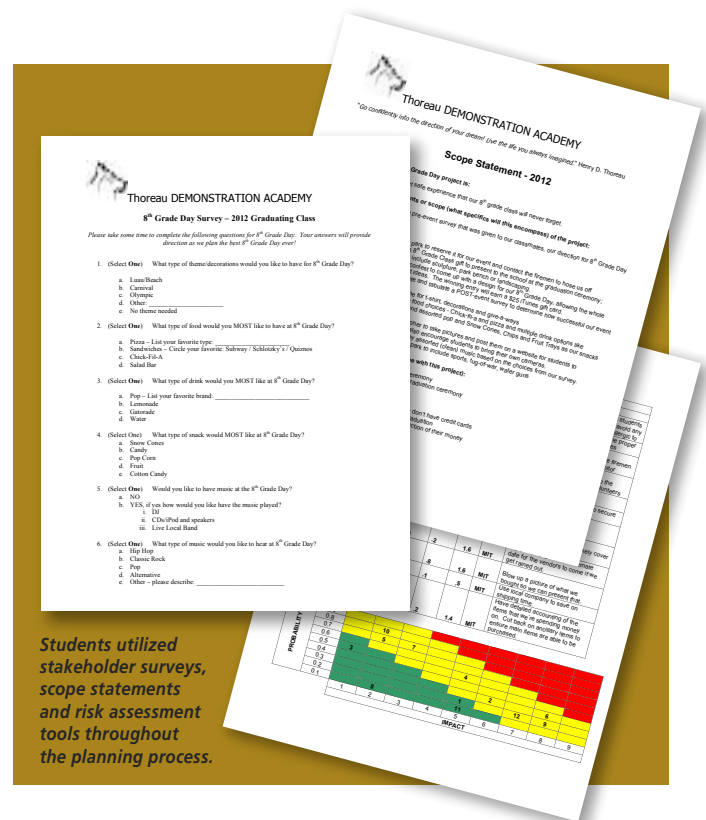
— Tom Padalino

Principal, Tulsa Middle School  
(Thoreau Demonstration Academy)

Based on all of the input, both the project management instruction and the 8th Grade Day for 2012 was a great success! The age appropriate course materials helped the students confidently approach their project and complete it in scope and on budget, just as they had planned.

The program received kudos from the middle school principal, “The kids love the program, they’re learning a lot and going home and telling their parents stories, and the parents are telling me how much their kids enjoy it. That’s telling me a lot!” —Tom Padalino, Principal, Tulsa Middle School (Thoreau Demonstration Academy)

The students provided proof of the knowledge and skills that they had gained through observations in the classrooms and presenting their projects to a group of project management professionals. To showcase their successful event and new knowledge, the team of students was invited to attend a PMI Regional Conference where they presented and led PMI member participants in some of their team building



Students utilized stakeholder surveys, scope statements and risk assessment tools throughout the planning process.

activities. The PMI professionals attending the event were very impressed by the applied skills and knowledge learned by students and many were motivated to replicate the program in their local schools.

More information about Tulsa program including the teambuilding exercises, curricula and templates can be found on the PMI Educational Foundation's website at [http://www.pmi.org/pmief/learningzone/tulsa\\_pm\\_for\\_youth.asp](http://www.pmi.org/pmief/learningzone/tulsa_pm_for_youth.asp)

## High School Program

Tulsa Tech High School also completed several projects with guidance, teaching and mentoring from Kris Reynolds, although they did not have the advantage of the full program that the middle school received. Kris was brought into the class by teacher Theresa Pinkston because the students were struggling to facilitate a project for an outside business owner. Knowing that Kris had been working with the middle school Theresa reached out to Kris for help.





**In the middle school project the hands-on instruction was done sequentially, starting with good planning, team building and project management learning exercises which led to the execution of a successful project.** In this case the class was really starting right in the middle of an ongoing project.

After learning about the class' first project, Kris led some team building activities and trained the students on the basics of project management, which helped motivate them to complete one additional project during the same school year. The two projects showed both the downsides of a poorly managed project versus the positive results of a well-run project. It also showed there is value to failure; the students learned as much through their failed project as their successful one; for through failure comes deeply internalized learning.

The project early in the year was completed with very little planning or project scheduling and without a clear understanding of what the business owner really wanted the students to accomplish. The project was to design promotional marketing items for the Elite Gym

program. After the students spoke to the client in their first meeting and got a general idea of what she wanted, they dove right in without any real planning or clarification of goals.

**When students fail to plan, it provides a rich learning experience for them** because they really struggle with their projects and learn from this mistake. Further meetings with the client uncovered more details and expectations until the students realized they were in trouble

because they had promised to complete a project with very little information and realized they were overcommitted.

To warm the students up to the project management curricula, Kris started with an engaging, team building hands-on exercises, one that used a cake baking example

that gave the students familiarity with the concept of sequencing tasks both in a linear and parallel manner. This prepared the students for more advanced project management concepts and methods.

Not given a chance to work with the students until very late in the project, this first project was completed but not ideally. The project should have taken 1 month but it took 3 months and was \$40,000 over the hypothetical budget. In the end the client was satisfied with her product but she was not pleased that it took so long.

Fortunately the students were able to undertake a second project – a student film festival. This project was much better organized and managed than the first. However, as with all projects, problems still had to be solved, overtime put in, and bureaucratic obstacles to success overcome. The project team had chosen the project, and they were all deeply invested in it, as it was

*“Project management skills are important in adulthood since everything you do out in the real world is project related.”*

*– Lauren*

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designed to highlight the artistic talent and creativity of their fellow students and were willing to invest the extra time and energy needed to make the project succeed.

During the second project the lessons learned from the first project were taken to heart, especially the need for comprehensive planning and determining the complete scope at the outset. It was a very successful project and a great deal of learning was accomplished.

In the end the Film Festival was a great success, coming in under budget and meeting all of the deadlines. The owners of the cinema even asked that the event be repeated next year. Kris was very pleased that the students recognized the difference between the two projects and how employing good project practices results in better project outcomes.

As he had in the middle school class, Kris introduced time management, goal setting and presentation skills, all critical life, learning and project management skills.

Kris included more advanced project management skills and concepts in the high school class. **Project management education needs to be targeted to students' abilities and grade levels**, providing younger students with more basic concepts and simplified language, building to more complex concepts and skills with older students.

As Ashley, one of the high school students in the project said, "I think just having that experience of failing and then also succeeding in the same year was good for all of us. I think it's something that we'll all be able to pull from, even later on in life. ...We also learned how important communication and planning are. A lot of what we learned are life skills. Even if we don't become project managers we learned how to work with people, be flexible, *very flexible*, and how to work with change in the workplace, and projects and clients."

*“Risk management helps me identify issues that might happen, which ones I should focus on and how to deal with them.”*

*— Ethan*

## Going forward

Kris plans to get more PMPs involved so the program can be expanded, eventually providing professional development for classroom teachers and PMPs to learn from each other and collaborate on teaching project management and leadership methods and concepts. To that end Kris has started some professional development classes for the Tulsa High School; teachers and several administrators attended his first session and immediately saw the benefits and decided to expand the program to reach more teachers and students. The administrators saw great value to the students and also wanted the teachers benefit from learning project management and leadership as a professional skill that will help them with instructional organization and planning. Theresa Pinkston is planning on replicating some of Kris's team building exercises with her teacher colleagues.

## Obstacles to Expansion of Program

Kris Reynolds sees the road ahead as promising but not without challenges, "I've talked to the superintendent about it and he thinks it's a good program, but he feels that you can't make wholesale changes of statewide curriculum. In his opinion the best bet is to go into the individual facilities where the principal has some control over it, so that's what we're going

Kris introduced time management, goal setting and presentation skills, all critical life, learning and project management skills.

to do. We could obviously move faster and have a greater impact if project management in schools was adopted on a state-wide basis as it has been done in North Carolina and Washington State.”

The work of bringing Project Management skills and methodologies into the curricula of the Tulsa school system is well underway, thanks to dedicated teachers, administrators and members of the PMI Tulsa Chapter. It will be exciting to see what they accomplish in 2012-2013 and beyond!

## Conclusion

The two project management and leadership programs in Tulsa demonstrated that students are eager to learn, understand and apply project management skills to help them be more successful in their students projects. Learning projects are becoming more commonplace in classrooms today and with some instruction and practice in effective project managing and leadership, students can also gain practical life skills, powerful learning skills and critical 21st century career skills that can be used throughout their lives.



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